

## REMARKS

Applicant acknowledges the indication that claims 2-4 and 8-10 contain allowable subject matter. Claims 1-14 are pending. Claims 2-4 and 8-10 have been canceled. Claims 1 and 6 have been amended. Claims 15-20 have been added. No new matter has been added by way of this amendment. Reconsideration of the application is respectfully requested.

Claims 1, 5, 6, 7, and 11-14 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 5,771,030 to *Suzuki* et al. In response to this ground of rejection, Applicant has amended independent claims 1 and 6 to more clearly define those features of the invention that distinguish it over the cited reference. Accordingly, for the reasons set forth hereafter, Applicant respectfully submits that all claims of record distinguish over the cited reference.

The present invention is directed to improving the flicker effect that is caused by different total driving voltages when switching frames (see page 5, lines 8-23 of the specification). In accordance with the method of the invention, common electrodes are used as a sensor to detect the display flicker, and the currently used inversion technique is switched to an alternately predetermined display flicker processing if the relative amplitude change of a detection voltage (i.e., a current inversion signal voltage) exceeds a predetermined voltage value while performing displays (see pages 3 and 4 of the specification).

U.S. Patent No. 5,771,030 to *Suzuki* et al. relates to a method and apparatus for driving liquid crystal in which a liquid crystal panel is driven by a voltage based on an analog signal representing an image (see col. 1, lines 5-10). *Suzuki* et al., however, fails to disclose a display circuit for supplying a signal pattern and a video and timing control unit to switch the

display flicker processing technique when the relative amplitude change of a detection voltage exceeds a predetermined voltage value when performing displays, as set forth in amended claims 1 and 6. In addition, the *Suzuki et al.* patent is directed to improving the problems caused by the voltage value of the original analog signal becoming greater than the threshold voltage because of excessive noise. Thus, *Suzuki et al.* does not contemplate the problem that is solved by the present invention as claimed.

Since the *Suzuki et al.* patent fails to contemplate the problem that is solved by the present invention, nor does this reference teach or suggest a display circuit for supplying a signal pattern, and a video and timing control unit for switching the display flicker processing technique, as recited in amended claims 1 and 6, it is Applicant's belief that these claims are patentable over the cited reference.

Insofar as claim 5 depends from claim 1 and claims 7 and 11-14 respectively depend from claim 6, it is Applicant's belief that these claims are also patentable.

Claims 15-20 have been added. Independent claim 5 corresponds to the combination of claims 1 and 2, while independent claim 18 corresponds to the combination of claims 6 and 8. In so far as claims 2 and 8 were indicated as containing allowable subject matter, new claims 5 and 18 should be patentable.

New claims 16 and 17 depend from claim 15, while new claims 19 and 20 depend from claim 18. In view of the patentability of new independent claims 15 and 18, these new dependent claims should also be patentable.

In light of the foregoing amendments and remarks, this application should be in condition for allowance. Early passage of this case to issue is respectfully requested. However,

if there are any questions regarding this response, or the application in general, a telephone call to the undersigned would be appreciated since this would expedite the prosecution of the application for all concerned.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'A.A. Collins', written over a horizontal line.

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1. (Amended) A method for auto-improving display flicker, comprising the steps of:  
detecting a level of display flicker and producing a detection voltage;  
comparing the detection voltage with a predetermined voltage; and  
automatically switching to a predetermined display flicker processing technique if the  
detection voltage is greater than the predetermined voltage.
5. The method of Claim 1, wherein a liquid crystal display (LCD) is selected as the  
display.
6. (Amended) A system for auto-improving display flicker, comprising:  
a display circuit for supplying a signal pattern;  
a detecting device for detecting the signal pattern and outputting a detection voltage;  
a comparator for comparing the detection voltage with a predetermined voltage and  
outputting a switch control signal when a value of the detection voltage is greater than the  
predetermined voltage value; and  
a video and timing control unit for switching the switch control signal into  
a predetermined display flicker processing technique.
7. The system of Claim 6, wherein the detecting device comprises a bandpass filter and a  
rectifier.

11. The system of Claim 6, wherein the predetermined voltage is inputted by an adjustable device.

12. The system of Claim 11, wherein the adjustable device is any active device able to be regulated.

13. The system of Claim 11, wherein the adjustable device is any passive device able to be regulated.

14. The system of Claim 6, wherein the display is a LCD.

15. (New) A method for auto-improving display flicker, comprising the steps of:

detecting a level of display flicker and producing a detection voltage;

comparing the detection voltage with a predetermined voltage; and

automatically switching to a predetermined display flicker processing technique if the detection voltage is greater than the predetermined voltage,

wherein the predetermined display flicker processing technique is one, other than currently used, selected from the group of dot inversion, line inversion, column inversion, n line inversion and n column inversion.

16. (New) The method of Claim 15, wherein a magnitude of the detection voltage is varied depending on the predetermined display flicker processing technique to be selected.

17. (New) The method of Claim 15, wherein the magnitude of the predetermined voltage is adjustable according to the predetermined display flicker processing technique to be selected.

18. (New) A system for auto-improving display flicker, comprising:

- a display circuit for supplying a signal pattern;
- a detecting device for detecting the signal pattern and outputting a detection voltage;
- a comparator for comparing the detection voltage with a predetermined voltage value and outputting a switch control signal when a value of the detection voltage is greater than the predetermined voltage value; and

a video and timing control unit for switching the switch control signal into a predetermined display flicker processing technique,

wherein the predetermined display flicker processing technique is one, other than currently used, selected from the group of dot inversion, line inversion, column inversion, n lines inversion and n columns inversion.

19. (New) The system of Claim 18, wherein the magnitude of the detection voltage is varied depending on the predetermined display flicker processing technique to be selected.

20. (New) The system of Claim 18, wherein the magnitude of the predetermined voltage is adjustable according to the predetermined display flicker processing technique to be selected.

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PATENT TRADEMARK OFFICE

Docket No: 3158/OJ019

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: Hsien-Ying CHOU

Confirmation No.: 2789

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Art Unit: 2673

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For: **AUTO-IMPROVING DISPLAY FLICKER METHOD**

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## Technology Center 2600

**MARK-UP FOR AMENDMENT OF JUNE 2, 2003**  
**PURSUANT TO 37 C.F.R. §1.121**

June 2, 2003

**BOX NON FEE**

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

Sir:

**IN THE CLAIMS:**

1. (Amended) [An] A method for auto-improving display flicker [method],  
comprising the [following] steps of:

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detecting [the] a level of display flicker [level] and producing a detection voltage;  
comparing the detection voltage with a predetermined voltage; and  
automatically switching to a predetermined display flicker processing technique if the  
detection voltage is greater than the predetermined voltage.

6. (Amended). [An] A system for auto-improving display flicker [system],  
comprising:

a display circuit for supplying a signal pattern;  
a detecting device for detecting the signal pattern and outputting a detection voltage;  
a comparator for comparing the detection voltage with a predetermined voltage [value]  
and outputting a switch control signal when [the] a value of the detection voltage [value] is  
greater than the predetermined voltage value; and  
a video and timing control unit for switching the switch control signal into a  
predetermined display flicker processing technique.

Respectfully submitted,



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